-------------------- in ustc_financial@yahoogroups.com, ustc-eclub@yahoogroups.com, and sjtu-sv@yahoogroups.com, at 10:xxam, 04/12/13

Copernicus told people the apparent results of observations could be misleading, because the Earth is an invariant for the humans based on the Earth.
The dynamics of brains is even much more complicated than the disputes between heliocentrism and geocentrism. The methods of astronomical observations used by both camps are at least same. However, the measurement of brain dynamics is not direct. And there are many ways could be explored. Different models for brain dynamics may rely on very different
measuring methods.

So it is extremely improper to give huge funding to the Brain Activity Map camp and make other camps unable to do researches due to lack of resources, especially because the Brain Activity Map's proposal is based on false analogies showing no validity of their Brain Activity Map model.
There is no commonly agreed abstraction model for brain dynamics so far, which is completely different from the situation of Human Genome Project.
why would the government create such a huge project to monopolize the researches of brain dynamics ?
They should diversify the research funding at this stage, to allow different approaches to explore.

-------------------- in ustc_financial@yahoogroups.com, at 15:08pm 04/10/13

[illegible]
[illegible]:"Shut up, do calculation !"
[illegible]
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[illegible],[illegible]
[illegible]
[illegible]Planck scale [illegible]
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-------------------- in Society for Neurosciences

* Is Brain Activity Map, the huge data model, a Valid Scientific Concept or Another Engineering Hype ?

~~~~~ 04/03/13

Obscurantism dominates when people talking "The importance of stupidity in scientific research". They misinterpreted scientific incentives as stupidity due to their ignorance of the dynamics of intelligence in sciences.
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The talked parallel between this Brain Activity Map project and Human Genome project is false, because as said, genes are exactly the valuable invariants in genetics, which was proposed in the 19th century, and already became a mature concept before Human Genome Project.

However, so far, people have no idea what are the valuable invariants in the dynamics of intelligence, and no clues whether the Brain Activity Map models could represent such invariants. Granting a huge amount of $100 million dollars based on such a false illusion without a formal public debate involving those who raised concrete reasons to oppose, would be a misconduct.

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The huge funding required is to build a huge data model for comprehensive brain activities. Developing theories and technologies in neurosciences does not need so much money at this stage.

Actually sciences use some abstraction and invariant studies to avoid too much data. Not all invariants are valuable.

If the valuable invariants of brain activities could not be represented as their map model, the huge precious research funding would be wasted. People with correct goals in neurosciences would have little chance to get supports in future.

Typically, scientific experiments only collect a very small portion of costly data based on carefully derived purposes, as in the cases of particle accelerators. Recording comprehensive behaviors is not only impractical, but also unnecessary.

The brain Activity Mapping mistook their proposal as an analogy of the Human Genome Project for genetics, because Genes are exactly the invariants in genetics, which was proposed in the 19th century, and already became a mature concept before Human Genome Project.

Actually the existence of genes was initially derived by Gregor Mendel, rather than the results of direct observations. A good scientist like Gregor Mendel would formulate simple experiments to derive the invariants in their domains first.

So they should present concrete evidences and reasonings of the invariants of brain activities, rather than vague visions, before starting such a huge comprehensive brain activity map project, especially after the 40 million dollars for Human Connectome project, and the 400 million dollars to Allen
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Institude for Brain Science, etc.

If after so many existing fundings, they still could not figure out the valuable invariants of brain activities, asking for more than 3 billion dollars to collect more data almost blindly would not help.

Brain Actvitiy Map could be a bottomless pit, due to the ignorance of valuable invariants of brain activities and clueless data collecting.

Billionaires could do hyped projects as hobbies, just as Newton tried Alchemy and others tried Perpetual Motion. Governments should not encourage misleading.

* Alchemy and Perpetual Motion: The Failure of Pure Technical Approaches Ignoring Invariant studies,

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The Brain Activity Map project does not have a valid case if they cannot explain why with tens of millions of neurons in their brains, rats cannot be trained to do those simple arithmetic operations on the most primitive calculators, and what the invariants of intelligece are, etc. Is the so-called "activity map" even a valid concept ?

If they cannot explain these, then they do not have correct understanding of neurons yet, and they should not start a mega-project based on ignorance. They should figure out some basics with simple experiments first.

If the people in Spuan project cannot explain these, then their project still provides very little values. The Spuan project only did somethings which a simple computer can do. That is fine if they do not ask for big funding, especially if Spuan uses Canada's money, no of my business.

Current neurosciences only make some progresses associated with perceptions, other organs, and motion, etc.,but not really in intelligence.

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In history, there were two famous failures of pure technical approaches which ignored the scientific studies of invariants: Alchemy and Perpetual Motion.

Mechanically, Perpetual Motion is impossible because the invariant of energy in mechanical motions.

Chemically, Alchemy is impossible because the invariants of elements in chemical reactions.

Galileo founded sciences and physics by studying the invariants in Galilean transformations. Only after that, Newton could build his systematic theories in dynamics.

Since it was not Newton who founded sciences and physics, Newton did not fully understand the importance of invariants. This might be the reason Newton jumped onto Alchemy without starting with the studies of invariants in chemistry.

That is also the reason I criticise the authors of the Brain Activity Mapping project paper and proposal. They mistaken the Brain Activity Mapping project as an analogy of the Human Genome Project for genetics.

As said such an anology is wrong, because Genes are exactly the invariants in genetics, which was proposed in the 19th century, and already became a mature concept before Human Genome Project. However, no one has figured out the invariants in brain activities or intelligence so far. The brain and intelligence researches should study the invariants first, rather than building brain activity mapping blindly.

Actually the existence of genes was initially derived by Gregor Mendel, rather than the results of direct observations. A good scientist like Gregor Mendel would formulate simple experiments to derive the invariants in their domains first, rather than spending billions of dollars blindly to trace too many neurons without a clue of what are the invariants.

Of course, billionaires could do these hyped projects as hobbies, just as Newton tried Alchemy. However, governments should not sponsor such projects. Instead, they should pay attention to the fundamental researches of the invariants of brain and intelligence.

The misleading paper of the Brain Activity Mapping project is at http://arep.med.harvard.edu/pdf/Alivisatos_BAM_12.pdf.

The news of it is at : http://www.nytimes.com/2013/02/18/science/project-seeks-to-build-map-of-human-brain.html

* Another Solyndra ? Why Should the Government Encourage the Misleading Human Brain Activity Map Project

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Alchemy is improper after Galileo founded sciences by studying the invariants in Galilean transformations. Newton should have started his chemistry interests by invariant studies first, rather than jumping onto Alchemy and indulging in it.

I do not blame the Alchemy practices before Galileo, which were actually helpful to the chemistry studies in future.

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Developing techniques to measure brain activities is completely different from applying such immature techniques to build a comprehensive map of the brain's activity.

The former is necessary and already well-funded. The latter is a huge misleading engineering project without scientific foundation. The billions of dollars asked to build such a comprehensive map could be a huge disaster, not only wasting money, but also hijacking the research community into wrong directions.

These mapping methods only could locate some static interface areas in brains as in the previous projects, which are only associated with perceptions, other organs, and motor functions, etc., containing very little intelligence. These types of projects need not a comprehensive brain map, and are already well-supported.

As said, the Brain Activity Map paper did not provide reasonings or evidences that such mapping methods would reveal the essential invariants of brain activities or intelligence.

Instead the paper mistook their project as an analogy of the Human Genome Project for genetics, ignoring the facts that genes are the invariants in genetics, which was proposed in the 19th century, and already became a mature concept before Human Genome Project. However, no one has figured out the invariants in brain activities or intelligence so far.

A good scientist like Gregor Mendel would formulate simple experiments to derive the invariants in their domains first, rather than spending billions of dollars blindly to trace too many neurons without a clue of what are the invariants.

After Galileo founded sciences by studying the invariants in Galilean transformations, it was improper for Newton to jump onto Alchemy and indulge in it without starting with the studies of invariants in chemistry.

So, why should the government still encourage a misleading Brain Activity Map project which ignores the studies of invariants in brain activities or intellignece ?

Their paper is at :
http://arep.med.harvard.edu/pdf/Alivisatos_BAM_12.pdf.

The news are at:
http://www.nytimes.com/2013/02/26/science/proposed-brain-mapping-project-faces-significant-hurdles.htmlhttp://www.nytimes.com/2013/02/18/science/project-seeks-to-build-map-of-human-brain.html

* The Severe Problems in Brain Activity Map Project

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Yesterday, there is a news that US government is considering to invest several billion dollars on a Brain Activity Map project with severe problems.

The brain map project is mistaken as an analogy of the Human Genome Project for genetics, which is exact where the problems come from.

The essential of sciences is to study the invariants in phenomena. Galileo founded sciences by studying the invariants in Galilean transformations.

Genes are exactly the invariants in genetics, which was proposed in the 19th century, had been studied for more than 100 years and already became a mature concept before Human Genome Project.

However, people have no idea what the invariants of brain activities and intelligence could be so far.

In such a situation, people should not spend billion dollars based on ignorance. They should diversify the research spending and pay attention to the theoretic studies of what could be the invariants of intelligent activities, rather than putting all eggs in one basket.

Actually the existence of genes was initially derived by Gregor Mendel, rather than the results of direct observations.

The name Brain Activity Map Project itself is misleading. Geographical invariants are obvious, so people can make maps easily. When people are
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not able to figure out the invariants of brain activities yet, they should not treat the studies of brains as mapping.

The news about Brain Activity Map Project is at :
http://www.nytimes.com/2013/02/18/science/project-seeks-to-build-map-of-human-brain.html